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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,342	12/31/2003	Jagrut Viliskumar Patel	030439	9469
23696 7590 01/26/2007 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			EXAMINER BHAT, ADITYA S	
			ART UNIT	PAPER NUMBER
			2863	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/26/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/26/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com  
kascanla@qualcomm.com  
t\_ssadik@qualcomm.com

## Office Action Summary

Application No.

10/750,342

Applicant(s)

PATEL ET AL.

Examiner

Aditya S. Bhat

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2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-11,14-22,25-30 and 33-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11,14-22,25-30 and 33-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/13/05</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-2, 5-11, 14-18 and 33-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106)), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, there does not appear to be a tangible result claimed. Merely "calculating an actual temperature of the chip as a function of the first and second ring oscillator frequencies" would not appear to be sufficient to constitute a tangible result, since the outcome of the "calculating an actual temperature of the chip as a function of the first and second ring oscillator frequencies" step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 5-11, 14-22 and 25-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Luick (USPUB 2003/022962)

With regards to claim 1, 10 and 30, Luick (USPUB 2003/022962) teaches a method, a processor and a computer readable program for determining an operating parameter of a chip having first and second ring oscillators, comprising:

measuring a frequency of the first ring oscillator; (Refer to figure 6)

measuring a frequency of the second ring oscillator; (Refer to figure 6) and

calculating an actual temperature of the chip as a function of the first and second ring oscillator frequencies. (Refer to figure 6)

With regards to claim 2, 11 and 22, Luick (USPUB 2003/022962) teaches obtaining two ring oscillator clock counts, separated by a time difference, from a ring oscillator; obtaining two independent clock counts, separated by the time difference, from a clock output independent from the ring oscillator; and calculating a ratio of the difference between the two ring oscillator clock values and the difference between the two independent clock values. (Page 4, Paragraph 0056)

With regards to claim 5, 14 and 25 Luick (USPUB 2003/022962) teaches multiplying the measured frequency of the first ring oscillator by the measured frequency of the second ring oscillator to obtain a result; and

determining, as a function of the result and characterization data of the chip, the chip's actual temperature. (Page 4, Paragraph 0056)

With regards to claim 6, 15 and 26, Luick (USPUB 2003/022962) teaches dividing the measured frequency of the first ring oscillator frequency by the measured frequency of the second ring oscillator to obtain a result; and

determining, as a function of the result and characterization data of the chip, the chip's process speed. (Page 4, Paragraph 0056)

With regards to claim 7, 16 and 27, Luick (USPUB 2003/022962) teaches multiplying the measured frequency of the first ring oscillator by the measured frequency of the second ring oscillator to obtain a second result;

determining, as a function of the second result and the characterization data, the chip's actual temperature; and

adjusting the determined process speed according to the determined actual temperature. (Page 4, Paragraph 0056)

With regards to claim 8, 17 and 28, Luick (USPUB 2003/022962) teaches calculating a scaled frequency value from the first and second measured ring oscillator frequencies and characterization data of the chip; comparing the calculated scaled frequency value with a known range of scaled frequency values relative to temperature; and determining, from the comparison, the actual temperature of the chip. (Page 4, Paragraph 0056)

With regards to claims 9, 18 and 29, Luick (USPUB 2003/022962) teaches calculating a scaled frequency value from the first and second measured ring oscillator

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frequencies and characterization data of the chip; comparing the calculated scaled frequency value with a known range of scaled frequency numbers relative to process speed; and determining, from the comparison, the process speed of the chip. (Page 4, Paragraph 0056)

With regards to claims 19, Luick (USPUB 2003/022962) teaches a system comprising:

a chip having first and second ring oscillators; (Page 4, Paragraph 0056) and a processor configured to:

measure a frequency of the first ring oscillator; (Refer to figure 6)

measure a frequency of the second ring oscillator; (Refer to figure 6) and

calculate process speed or temperature of the chip as a function of the first and second ring oscillator frequencies. (Refer to figure 6)

With regards to claims 20, Luick (USPUB 2003/022962) teaches the chip comprises the processor. (Refer to figure 7)

With regards to claims 21, Luick (USPUB 2003/022962) teaches the processor is separate from but operably connected to the chip. (Refer to figure 7)

### ***Response to Arguments***

Applicant's arguments filed 9/19/05 have been fully considered but they are not persuasive.

Applicant is reminded that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification."

Applicant always has the opportunity to amend the claims during prosecution, and

broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

In this instance applicant argues that the prior art of record does not teach or suggest computing the actual temperature of the chip (Page 4, Paragraph 056). Referring to paragraph 0031-0032 of applicant's specification, applicant states that the actual temperature is estimated. This temperature estimation is a function of frequencies from two ring oscillators. Thus the invention is believed to read on the prior art of record.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okada et al. (USPN 7,165,183) teaches temperature controlled semiconductor circuit, Suzuki et al. (USPN 4,453,834) teaches a electronic timepiece with temperature compensation, and Smith et al. (USPUB 2002/0075163) teaches wireless spread-spectrum telesensor chip with synchronous digital architecture.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S. Bhat whose telephone number is 571-272-2270. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aditya Bhat  
January 18, 2007

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800